REMARKS

Reconsideration is espectfully requested.

Claims 1 through 1 and 41 remain in this application. No claims have been cancelled. Cl ims 25 through 40 have been withdrawn. Claims 42 through 44 have been added.

Paragraphs 2 and 3 of t e Office Action

Claims 1 through 2 and 41 have been rejected under 35 U.S.C. Section 103(a) as being npatentable over Daniels-Barnes et al. U.S. 6,665,705 (hereinafter referred to simply as "Daniels") in view of Bereiter U.S. 5,875,306.

Claim 1 requires "broadcasting to the network a request to become the gateway from one of the computing devices capable of connecting to the Internet, wherein the request to become the gateway includes the connection priority of the computing device broadcasting the request" and "assigning the computing device broadcasting the request as the gateway for the network if the computing device broadcasting the request does not receive a response from the other computing devices within a predetermined time period".

In the "Response to Arguments" section of the final Office Action, it is conceded that "Daniels fails to teach broadcasting", but then it is asserted that:

> However, Daniels teaches multicasting is used (see column 3, lines 7-10).
> It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Daniels by specifying broadcasting in place of multicasting since the same functionality of sending a single message to a group of destinations is achieved.

Thus, the rejection of all of the claims in the final Office Action is based upon the contention that "multicasting" is functionally equivalent to the

requirement of "broadcasting" in the claims of the present patent application. However, the rejection provides no evidence that there is any functional equivalence between "multicasting" and "broadcasting", especially in the eyes of one of ordinary skill in the art. In fact, the only support for the alleged functional equivalence between "multicasting" and "broadcasting" is the assertion that since both "multicasting" and "broadcasting" *may* involve sending a message to a "group of destinations", that the terms are therefore equivalent.

However, it is submitted that one of ordinary skill in the art recognizes a difference between "multicasting" and "broadcasting", as a request may be "broadcast" without restriction on the recipients, while a request that is multicast is sent with restriction to a selected or limited number of recipients. Further, while a request may be "broadcast" to no recipients or a *single* recipient *or multiple* recipients, a request is "multicast" to *multiple* recipients. See, for example, the attached Exhibits "A" and "B", which are printouts from the website www.comupteruser.com showing definitions for "broadcasting" and "multicasting", and which distinguishes between the meanings of the terms.

And the distinction here is not merely linguistic--multicasting is submitted to require more knowledge of the recipients on a network (as it requires selecting and identifying the receivers) than broadcasting (which does not require specific knowledge of the receivers), and thus it is submitted that the claimed invention is more flexible and capable than the system that requires multicasting discussed in Daniels.

It is therefore submitted that one of ordinary skill in the art would not recognize that "multicasting" is functionally equivalent to "broadcasting".

More specifically, in the text of the rejection of claim 1 in the Office Action, it is contended that:

broadcasting o the network a request to become the gateway from one of the co iputing devices capable of connecting to the Internet, wherein t e request to become the gateway Includes the connection priority of the computing device broadcasting the request (column 3, lines 7- 0, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the seco dary proxy location (i.e. "request to become a gateway"); see abst act); and

assigning the computing device broadcasting the request as the gateway for the net work (figure 9; column 3, lines 10-11, Daniels discloses this mess ge indicates that the secondary proxy is now the primary proxy).

Thus, the rejection of cl im 1 places considerable reliance upon one section of the Daniels patents lo ated at col. 2, line 62 through col. 3, line 11 (emphasis added):

The present inve ntion provides a method in a distributed data processing system or providing proxy services. Requests are processed by a pri ary proxy, using a shared memory in the distributed data pr cessing system. A challenge from a secondary proxy to the prima y proxy is detected. A determination is made as to whether the second ry proxy has priority over the primary proxy. This may be determined sing priorities assigned to the proxies. Responsive to determining whe her the secondary proxy has priority over the primary proxy, a pr iority of the secondary proxy is stored. Responsive to the secondary pr xy having priority over the primary proxy, the secondary proxy to is allowed access the shared memory. Further, the secondary proxy is then allowed to multi-cast a message to clients indicating the seco dary proxy's location. This message indicates that the secondary prox is now the primary proxy.

However, this statement n the Summary of the Invention portion of the Daniels patent lacks any indication that a request is "*broadcast*[] to the network" as required by he language of claim 1. Instead, since Daniels states that a "challenge *f om* a secondary proxy *to* the primary proxy is detected", Daniels is mo e likely to leads one of ordinary skill in the art to believe that the request l y the secondary proxy is directed to the primary proxy, and not to any oth er proxy or device, particularly in a "broadcast to the network".

The interpretation f Daniels that the challenge from the secondary proxy is not broadcast tc all proxies, but instead is directed to the primary proxy, is further support d by the "Detailed Description" of the Daniels patent, which indicates a col. 6, lines 6 through 11 that:

> APPES 306 when lc ated in the current proxy is responsible for responding to chall nges by aproxies attempting to join the UPnP network. This servi e is responsible for employing a proxy election algorithm when apr xies come online and resolving proxy priorities.

and at col. 8, lines 10 th ough 11:

> The process beg ns with a first server issuing a primary proxy challenge (step 500 .

and further at col. 8, lin 28:

> The proxy recei es and processes requests (step 508).

and also at col. 8, lines 1 through 63:

> The process beg ns by identifying the challenge from the aproxy (step 700). This ide atification includes identifying the priority and USN of the aproxy.

Nothing in these descrip ions of the challenge by an "aproxy" to the current proxy in the Daniels sys em teaches or suggests that the challenge from the aproxy to the current pr xy is "broadcast" or received by other "aproxies" on the Daniels system. ..s the "aproxy" in the Daniels system is aware of the identity of the curre t proxy through the "heartbeat" that is "multicast". Further, since the heartb at includes the identity of the current proxy, there is no need for the aprox to "broadcast[]. . . a request to become the gateway", as the aproxy nows the identity of the current proxy and therefore knows where t direct the request. This procedure in Daniels is in contrast to one illustrati e situation addressed by the claimed invention, in which the previous gate ay has been lost or is otherwise unavailable to act as the gateway, and thus it is most likely unable to receive and resolve such requests.

Further, the Abstra t of the Daniels patent states that (emphasis added):

> A method and appa atus in a distributed data processing system for providing proxy ser ices. Requests are processed by a primary proxy, using a shared mem ory in the distributed data processing system. A challenge from a se condary proxy to the primary proxy is detected. A determination is ma de as to whether the secondary proxy has priority over the primary pr xy. This may be determined using priorities assigned to the pro ies. Responsive to determining whether the secondary proxy ha priority over the primary proxy, a priority of the secondary proxy is tored. Responsive to the secondary proxy having priority over the pr mary proxy, the secondary proxy to is allowed access the shared m mory. Further, the secondary proxy is then allowed to multi-ca t a message to clients indicating the secondary proxy's location. Th is message indicates that the secondary proxy is now the primary pr xy.

It is noted that the Abstr act of the Daniels patent also lacks any description of the broadcasting of re quests, and is not inconsistent with the interpretation that an "a roxy" directs its request to the current proxy without broadcasting the request to other "aproxies".

Further, with respe t to Figure 9 of Daniels and the accompanying description, it is noted t at nothing in the description indicates that there is any "broadcast[]. . . [of] a request". In particular, the Daniels patent at col. 9, lines 41 through 52 (e nphasis added):

> With reference t ext to FIG. 9, a flowchart of a process for resolving a proxy f ilure is depicted in accordance with a preferred embodiment of the resent invention. The process beings by updating the precedence vec or (step 900). In this example, the precedence vector is updated t remove the failed proxy. Alternatively an indication may be m ade in the vector that the proxy has failed. Next, the aproxy with the highest priority in the proxy precedence vector is identified (step 902). This identified aproxy is set or designated as the new proxy (step 90), and the new proxy is unblocked from the monitor (step 906) with the process terminating thereafter.

This description of the p roxy failure process lacks any indication that there is *any* broadcast of requ sts by computing devices, as it merely indicates that "the aproxy with th highest priority in the proxy precedence vector is

identified", but does not provide any further detail as to how that "aproxy" with the highest priority is identified.

It is therefore subn itted that, in view of the above, the Daniels patent does not teach or sugges the requirement of "broadcasting to the network a request to become the ga eway from one of the computing devices capable of connecting to the Interne t" of claim 1.

Claim 1 further req uires that "the request to become the gateway includes the connection riority of the computing device broadcasting the request". In contrast to his requirement of claim 1, the Daniels patent discusses a proxy preced nce vector that is resident in a network cache, which is used to resolve the relative priorities of the proxies. See, for example, the Daniels pat nt at col. 6, lines 33 though 45 (emphasis added):

> Proxy precedenc e vector 406 represents the aggregation of each proxies respective p riority. Primary APPES 306 in FIG. 3 generates a unique proxy rank f or registered proxies, and updates cached proxy precedence vector 4 06 to reflect the relative priority of the registered proxies. Proxy prec dence vector 406 alleviates the need for further proxy challenges b maintaining a logical representation of proxy precedence. APPES 306 in FIG. 3 persists proxy precedence vector 406 in network cache 4 0, as opposed to a local cache, to circumvent a single point of fail re condition, when the primary proxy fails.

Thus, a request from an proxy lacks the priority of the aproxy, as the priorities of the aproxie are maintained in the proxy precedence vector of the network cache, and n ot in any "local cache" that may be at the individual aproxies. Tu ning again to the description in Daniels patent regarding Figure 9 of th t patent, it is noted that at col. 9, lines 41 through 52 (emphasis added):

> With reference t ext to FIG. 9, a flowchart of a process for resolving a proxy f ilure is depicted in accordance with a preferred embodiment of the resent invention. The process beings by updating the precedence vec or (step 900). In this example, the precedence vector is updated t remove the failed proxy. Alternatively an indication may be m ade in the vector that the proxy has failed. Next, the aproxy with the highest priority in the proxy precedence vector is

> identified (step 902). This identified aproxy is set or designated as the new proxy (step 90), and the new proxy is unblocked from the monitor (step 906) with the process terminating thereafter.

Thus, not only is it appa ent from the Daniels disclosure that there is no broadcasting of requests it is also clear that the request that is sent by an aproxy to the current prc xy lacks the priority of the aproxy as the priorities are maintained in a prox precedence vector on a central network cache.

It is therefore also submitted that, in view of the above, the Daniels patent does not teach or suggest the requirement that "the request to become the gateway includes the connection priority of the computing device broadcasting the request of claim 1.

In the rejection in he Office Action of claim 1, it is conceded that:

> Daniels fails to teach explicitly assigning the computing device broadcasting the request as the gateway for the network if the computing device broadcasting the request does not receive a response from the other computing devices within a predetermined time period.

but it is then contended n the Office Action that:

> However, Bereiter teaches reconfiguring computer resources in a distributed computer enterprise environment. Bereiter teaches if the computing device broadcasting the request does not receive a response from the other computing devices within a predetermined time period (column 12, lines 20-32, Bereiter discloses determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence).

Initially, it is noted that claim 1 requires "assigning the computing device broadcasting the request as the gateway for the network if the computing device broadcasting the equest does not receive a response from the other computing devices withi a predetermined time period". As noted above in the discussion of the Da iels patent, Daniels does not disclose the "broadcasting" of a requ st as asserted in the Office Action.

Further, it is also pointed out that the referenced portion of the Bereiter patent does not deal with an element that is capable of acting as a "gateway", but instead discusses an "endpoint machine" that requires a "gateway machine to communicate with a larger network. In particular, the Bereiter patent at col. 12, lines 20 through 32 states:

> determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence;
> if the endpoint machine can establish communication with the first gateway machine upon the predetermined occurrence, connecting the endpoint machine to the first gateway machine;
> if the endpoint machine cannot establish communication with the first gateway machine upon the predetermined occurrence, having the endpoint machine broadcast a boot request with an extension unique to the management server;

The referenced portion of the Bereiter patent appears to indicate that an endpoint machine attempts to establish communication with a gateway, and if it is unsuccessful in that attempt, the endpoint machine "broadcast[s] a boot request" to a "management server". However, it is noted that the endpoint machine described in the Bereiter patent would never be able to function as a "gateway for the network" as required by the language of claim 1, as the endpoint machine lacks any connection with a larger network. In contrast, the "management server" of the system described in the Bereiter patent merely locates another "gateway machine" for the endpoint computer to use to connect to the larger network. Note the description in the Bereiter patent of the endpoint computer at col. 6, lines 49 through 56 (emphasis added):

> An endpoint preferably communicates only with its gateway. Requiring all endpoint communication to pass through a single gateway greatly simplifies connectivity issues. After a successful login, both endpoint and gateway know a working address by which to address one another. If a DHCP address lease expires, or anything changes in the network topology, then the next endpoint login will establish the new endpoint to gateway addresses.

Thus, in the Bereiter system, the endpoint computer seeking to communicate with the larger network is unable to become a "gateway" to the larger

network, and thus it is s bmitted that the Bereiter patent could not lead one of ordinary skill in the a t to the requirement of claim 1 that "the computing device broadcasting the equest" is assigned "as the gateway for the network".

It is therefore subn itted that neither the Daniels patent nor the Bereiter patent teaches n or suggests the requirement of "assigning the computing device broadc asting the request as the gateway for the network if the computing device br adcasting the request does not receive a response from the other computin devices within a predetermined time period" of claim 1.

Claim 11 includes imilar requirements to those discussed above, and therefore for the reasons set forth above, claim 11 is also submitted to be patent able over the Dan els and Bereiter patents.

With respect to cla m 16, which requires "broadcasting to the network a request to become the ateway from the respective computing device within the predeterminec time period, wherein the request to become the gateway includes the cor nection priority of the respective computing device" and "assigning t e respective computing device as the new gateway for the network if the re pective computing device receives no response from the other computin devices within the predetermined time period", it is believed that the rema ks set forth above show that the Daniels and Bereiter patents, either alone or in combination, do not teach these requirements. Claim 21 ncludes similar requirements, and is also submitted to be allowable over the cited patents.

It is therefore subr itted that the cited patents, and especially the allegedly obvious combi ation of Daniels and Bereiter set forth in the rejection of the Office A ction, would not lead one skilled in the art to the applicant's invention as required by claims 1, 11, 16, and 21. Further,

claims 2 through 10, 12 through 15, 17 through 20, and 22 through 24, which depend from claims 1, 11, 16, and 21, respectively, also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

Withdrawal of the 103(a) rejection of claims 1 through 24 and 41 is therefore respectfully requested.

Added Claims

Added claim 42 requires that "broadcasting to the network the request to become the gateway comprises sending the request to more than one computing device without restriction on a number of recipients". This is clearly contrary to the teaching of Daniels, which multicasts to an identified group of devices.

Added claim 43 requires that "broadcasting to the network the request to become the gateway comprises sending the request to each computing device of the plurality of computing devices". Again, this is contrary to the discussion of multicasting in Daniels.

Added claim 44 requires that "broadcasting to the network the request to become the gateway comprises sending the request to all computing devices of the plurality of computing devices". Once again, this is contrary to the discussion of multicasting in Daniels.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

GATEWAY, INC.

By _____ Date: DEC. 20, 2005

Jeffrey A. Proehl (Reg. No. 35,987)
WOODS, FULLER, SHULTZ & SMITH P.C.
P.O. Box 5027
Sioux Falls, SD 57117-5027
(605)336-3890 FAX (605)339-3357